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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/581,845

**Applicant(s)**

WANG ET AL.

**Examiner**

MARY ANNE KAY

**Art Unit**

2426

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/9/2009, 4/30/2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This Office Action is in response to an AMENDMENT entered December 9, 2009 for the patent application 10/581845 filed on March 9, 2006.
2. The First Office Action of September 9, 2009 is fully incorporated into this Final Office Action by reference.

### *Status of Claims*

3. Claims 1-15 are pending in this application.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohyama (U.S. PGPub 2002/0133826 A1, referred to as **Ohyama**) in view of Krause et al. (U.S. Patent 5,949,948, referred to as **Krause**).

### **Claim 1**

**Ohyama** teaches:

A video-on-demand system enabling a user to modify play parameters of a selected video, said system comprising:  
a media server for transmitting video signal comprising the selected video  
(**Ohyama ¶** 0008; Examiner's Notes (EN): Video on Demand system),  
a client player for receiving the video signal (**Ohyama ¶** 0045; EN: Search server in user home or within set top box) and displaying the selected video,

**Ohyama** fails to teach:

said media server generating a first series of searchable index frames from the video signal during transmission of the video signal, and storing said first series of searchable index frames thereon; and  
said client player generating a second series of searchable index frames from the received video signal and storing the second series of searchable index frames thereon, said client player accessing said first series or said second series of searchable index frames and obtaining a required searchable index frame therefrom upon receipt of a request to modify the play parameters for display of the selected video, said required searchable index frame providing a new starting point for displaying the selected video, said media server and said client player being operatively connected by a communication network.

**Krause** teaches:

said media server generating a first series of searchable index frames from the video signal during transmission of the video signal, and storing said first

series of searchable index frames thereon (**Krause** C5:33-44, C11:35-64;  
EN: Searchable index of I-frames can be done at the server); and  
said client player generating a second series of searchable index frames from the  
received video signal and storing the second series of searchable index  
frames thereon, said client player accessing said first series or said  
second series of searchable index frames and obtaining a required  
searchable index frame therefrom upon receipt of a request to modify the  
play parameters for display of the selected video, said required searchable  
index frame providing a new starting point for displaying the selected  
video, said media server and said client player being operatively  
connected by a communication network (**Krause** C5:33-44, C11:35-64;  
EN: Searchable index of I-frames can be done at the server).

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the  
invention was made to modify the teachings of **Ohyama** with the frame indexing  
as taught by **Krause** providing efficient and rapid retrieval of I-frame data blocks  
may be provided by the storage controller for providing appropriate blocks of  
memory to the decoder.

***Claim Rejections - 35 USC § 103***

6. Claims 2 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable  
over **Ohyama** in view of Ellis et al. (U.S. PGPub 2004/0117831 A1, referred to as **Ellis**).

**Claim 2**

**Ohyama** fails to teach:

a video database operatively coupled to said media server, said video database comprising a plurality of videos selectable by the user.

**Ellis** teaches:

a video database operatively coupled to said media server, said video database comprising a plurality of videos selectable by the user (**Ellis** ¶ 0133; EN: may be maintained on a server at the television distribution facility or at database).

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Ohyama** with the video database as taught by **Ellis** providing a searchable database in the EPG of all of the features of each of the movies in the movie database.

#### **Claim 4**

**Ohyama** fails to teach:

a feature database operatively coupled to said media server;  
said feature database comprising a plurality of extracted features;  
wherein one or more of the plurality of extracted features are associated with one of the videos in the video database.

**Ellis** teaches:

a feature database operatively coupled to said media server (**Ellis ¶¶ 0141-0142**;  
EN: Data displayed in the feature screens obtained from a server and a  
features database),  
said feature database comprising a plurality of extracted features (**Ellis Fig. 15**,  
el. 230, Fig. 16, el. 240; **¶¶ 0141-0142**),  
wherein one or more of the plurality of extracted features are associated with one  
of the videos in the video database (**Ellis ¶ 0141**).

**Rationale:**

It would have been obvious to one of ordinary skill in the art at the time the  
invention was made to modify the teachings of **Ohyama** with the video features  
in a database as taught by **Ellis** providing a searchable database in the EPG of  
all of the features of each of the movies in the movie database.

**Claim 5**

**Ohyama** fails to teach:

wherein said plurality of extracted features provide a means for said user to  
search and identify a video for subsequent display based on a desired  
criteria represented by one or more of the plurality of extracted features.

**Ellis** teaches:

wherein said plurality of extracted features provide a means for said user to  
search and identify a video for subsequent display based on a desired  
criteria represented by one or more of the plurality of extracted features  
(**Ellis ¶ 0135**).

**Rationale:**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Ohyama** with the searching as taught by **Ellis** providing a searchable database in the EPG of all of the features of each of the movies in the movie database.

**Claim 6**

**Ohyama** fails to teach:

wherein one or more of the plurality of extracted features is either a word identifier or an image identifier.

**Ellis** teaches:

wherein one or more of the plurality of extracted features is either a word identifier or an image identifier (**Ellis** ¶ 0142).

**Rationale:**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Ohyama** with the word and image identifier as taught by **Ellis** providing a searchable database in the EPG of all of the features of each of the movies in the movie database.

**Claim 7**

**Ohyama** fails to teach:

wherein one or more of the plurality of extracted features is a movie clip representative of one of the videos in the video database.

**Ellis** teaches:



wherein one or more of the plurality of extracted features is a movie clip representative of one of the videos in the video database (**Ellis ¶¶ 0141-0142**).

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Ohyama** with the movie clip as taught by **Ellis** providing a searchable database in the EPG of all of the features of each of the movies in the movie database.

***Claim Rejections - 35 USC § 103***

7. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ohyama** in view of Guedalia et al. (U.S. Patent 6,721,952, referred to as **Guedalia**).

**Claim 3**

**Ohyama** fails to teach:

wherein said videos in the video database are in an encoded format

**Guedalia** teaches:

wherein said videos in the video database are in an encoded format (**Guedalia** Fig. 4; C19:39-50; EN: Although the process of encoding is described here, each video is subjected to this production tool and encoded).

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Ohyama** with the video database

as taught by **Guedalia** providing movies ready for distribution and conversion for streaming.

**Claim 8**

**Ohyama** fails to teach:

a video production module for encoding each of said videos into an encoded format.

**Guedalia** teaches:

a video production module for encoding each of said videos into an encoded format (**Guedalia** Fig. 4; C19:39-50).

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Ohyama** with the encoder as taught by **Guedalia** providing a production tool which enables a content provider to take a raw movie and encode it to ready it for distribution and conversion for streaming.

***Claim Rejections - 35 USC § 103***

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ohyama** in view of **Ellis**.

**Claim 9**

**Ohyama** fails to teach:

wherein said video production module further generates said extracted features.

**Ellis** teaches:

wherein said video production module further generates said extracted features  
(**Ellis ¶¶ 0141-0142**).

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Ohyama** with the extracted features as taught by **Ellis** providing a searchable database in the EPG of all of the features of each of the movies in the movie database.

***Claim Rejections - 35 USC § 103***

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ohyama** in view of **Watt** (U.S. PGPub 2004/0221323 A1, referred to as **Watt**).

**Claim 10**

**Ohyama** fails to teach:

a user account management module for providing a means for controlling user access.

**Watt** teaches:

a user account management module for providing a means for controlling user access (**Watt ¶ 0148**).

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Ohyama** with the user authentication as taught by **Watt** providing identification of the person at the workstation as a legal user and proper participant in the system.

***Claim Rejections - 35 USC § 103***

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jun et al. (U.S. PGPub 2003/0122861 A1, referred to as **Jun**) in view of **Krause** in further view of Liu et al. (U.S. PGPub 2005/0213656 A1, referred to as **Liu**) in further view of Igawa et al. (U.S. PGPub 2004/0086262 A1, referred to as **Igawa**) in further view of **Watt**.

**Claim 11**

**Jun** teaches:

A method for enabling a user to modify play parameters of a selected video in a video-on-demand system, said method comprising:  
establishing a connection between a media server and a client player (**Jun ¶¶ 0009**);  
receiving, by said media player, a request for the selected video from said client player (**Jun ¶¶ 0058**);  
transmitting, by said media player, a video signal comprising the selected video to the client player (**Jun ¶¶ 0058**);  
displaying said selected video signal from said new starting point (**Jun ¶¶ 0020-0027**);

**Jun** fails to teach:

generating, at the media player, a first series of searchable index frames from the video signal while transmitting the video signal, and  
storing the first series of searchable index frames at the media player;

generating a second series of searchable index frames, storing said second series of searchable index frames and displaying the selected video at the client player;

receiving the video signal and displaying said selected video by the client player; at the client player from the received video signal while receiving the video signal receiving, by the client player, a request to modify play parameters of the selected video,

searching said first series or second series of searchable index frames for a required searchable index frame, said required searchable index frame providing a new starting point for displaying said selected video;

terminating said connection between a media server and a client player upon completion of display of the selected video.

**Krause teaches:**

generating, at the media player, a first series of searchable index frames from the video signal while transmitting the video signal (**Krause** C5:33-44, C11:35-64; EN: Searchable index of I-frames can be done at the server), and

storing the first series of searchable index frames at the media player (**Krause** C5:33-44, C11:35-64; EN: Searchable index of I-frames can be done at the server);

generating a second series of searchable index frames, storing said second series of searchable index frames and displaying the selected video at the

client player (**Krause** C5:33-44, C11:35-64; EN: Searchable index of I-frames can be done at the server);

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to **modify** the teachings of **Ohyama** with the frame indexing as taught by **Krause** providing efficient and rapid retrieval of I-frame data blocks may be provided by the storage controller for providing appropriate blocks of memory to the decoder.

**Jun** fails to teach:

receiving the video signal and displaying said selected video by the client player; at the client player from the received video signal while receiving the video signal receiving, by the client player, a request to **modify** play parameters of the selected video.

**Liu** teaches:

receiving the video signal and displaying said selected video by the client player (**Liu ¶ 0085**); at the client player from the received video signal while receiving the video signal receiving, by the client player, a request to **modify** play parameters of the selected video (**Liu ¶ 0085**)

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to **modify** the teachings of **Jun** with the client generated

searchable index frame as taught by **Liu** providing video indexing and summarization techniques that are user-tunable.

**Jun** fails to teach:

searching said first series or second series of searchable index frames for a required searchable index frame, said required searchable index frame providing a new starting point for displaying said selected video;

**Igawa** teaches:

searching said first series or second series of searchable index frames for a required searchable index frame, said required searchable index frame providing a new starting point for displaying said selected video (**Igawa** ¶¶ 0006-0009; EN: Examiner interprets that indexing is performed on video);

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Jun** with the starting point as taught by **Igawa** providing efficient and rapid retrieval of I-frame data blocks may be provided by the storage controller for providing appropriate blocks of memory to the decoder.

**Jun** fails to teach:

terminating said connection between a media server and a client player upon completion of display of the selected video.

**Watt** teaches:

terminating said connection between a media server and a client player upon completion of display of the selected video signal (**Watt ¶ 0206**).

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Jun** in view of **Liu** with the termination as taught by **Watt** providing a closure to the entrance into the network by unauthorized users attempting to use the client player's previous connection authorization.

***Claim Rejections - 35 USC § 103***

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Jun** in view of **Ellis**.

**Claim 12**

**Jun** teaches:

after establishing a connection between said media player and said client player (**Jun ¶ 0009**),

**Jun** fails to teach:

searching a feature database, said feature database comprising a plurality of extracted features, wherein one or more of the plurality of extracted features are associated with one of a plurality of videos in a video database;

selecting a desired video from the video database based on one or more of the plurality of extracted features; and



transmitting the request for the selected video from the client player.

**Ellis** teaches:

searching a feature database, said feature database comprising a plurality of extracted features, wherein one or more of the plurality of extracted features are associated with one of a plurality of videos in a video database (**Ellis ¶¶ 0133, 0135**; EN: may be maintained on a server at the television distribution facility or at database);  
selecting a desired video from the video database based on one or more of the plurality of extracted features (**Ellis ¶ 0135**); and  
transmitting the request for the selected video from the client player (**Ellis ¶ 0101**).

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Jun** with the feature database and request as taught by **Ellis** providing a searchable database in the EPG of all of the features of each of the movies in the movie database.

***Claim Rejections - 35 USC § 103***

12. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Jun** in view of **Watt**.

**Claim 13**

**Jun** fails to teach:

prior to establishing a connection between said media player and said client player, authenticating the user.

**Watt** teaches:

prior to establishing a connection between said media player and said client player, authenticating the user (**Watt ¶ 0148**).

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Jun** with the user authentication as taught by **Watt** providing identification of the person at the workstation as a legal user and proper participant in the system.

***Claim Rejections - 35 USC § 103***

13. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Jun** in view of **Ellis** in further view of **Guedalia**.

**Claim 14**

**Jun** fails to teach:

encoding a plurality of videos for subsequent transmission;  
saving said encoded videos in the video database;  
identifying one or more extracted features for each of the plurality of videos;  
saving said extracted features in a searchable configuration in the features database;

**Ellis** teaches:

identifying one or more extracted features for each of the plurality of videos (**Ellis ¶¶ 0141-0142**);  
saving said extracted features in a searchable configuration in the features database (**Ellis ¶¶ 0135, 0141-0142**).

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Jun** with the features database as taught by **Ellis** providing a searchable database in the EPG of all of the features of each of the movies in the movie database.

**Jun** fails to teach:

encoding a plurality of videos for subsequent transmission;  
saving said encoded videos in the video database.

**Guedalia** teaches:

encoding a plurality of videos for subsequent transmission (**Guedalia Fig. 4; C19:39-50; EN: Although the process of encoding is described here, each video is subjected to this production tool and encoded**);  
saving said encoded videos in the video database (**Guedalia Fig. 4; C19:39-50**).

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Jun** with the encoding as taught by **Guedalia** providing a production tool which enables a content provider to take

a raw movie and encode it to ready it for distribution and conversion for streaming.

***Claim Rejections - 35 USC § 103***

14. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Jun** in view of **Sherr et al.** (U.S. PGPub 2002/0032905 A1, referred to as **Sherr**).

**Claim 15**

**Jun** fails to teach:

wherein the media server is connected to a plurality of client players.

**Sherr** teaches:

wherein the media server is connected to a plurality of client players (**Sherr ¶ 0029**).

Rationale:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of **Jun** with the plurality of client players as taught by **Sherr** providing benefits including bringing vast amounts of content within reach of a large audience, significantly lower costs for physical production, storage and transportation, possible multiple simultaneous access, savings in energy and physical media, e.g., paper, and indirectly lower environmental pollution.

***Response to Arguments***

15. The objection to the drawings on Fig. 19 is withdrawn.
16. Applicant's arguments filed December 9, 2009, have been fully considered.

In reference to Applicant's argument:

**Rejections under 35 U.S.C 103(a)**

**A. Claim 1: Jun in view of Liu**

The Examiner has rejected claim 1 as being unpatentable over U.S. Patent Publication No. 2003/0122861 to Jun in view of U.S. Patent Publication No. 2005/0313656 to Liu. Applicants respectfully traverse the Examiner's rejection and submits the following for the Examiner's consideration.

Jun teaches a video browsing apparatus for simultaneously delivering information on video content and structure to users. The video browsing apparatus includes a client apparatus that includes a video browsing interface 11, a control means 12 and an input means 13. Jun teaches that the video browsing interface 11 displays a scene key frame list composed of key frames presenting each scene of a video, and the scene structure key frame list composed of important key frames of each scene on the scene key frame list. The control means 12 controls the reproduction of a media file according to index information, and controls non-linear browsing based on the scene key frame list and the scene structure when a request for non-linear browsing is received. The control means 12 also prepares relevant index information by loading a media file.

Jun further teaches that the video browsing apparatus includes a server that has a media file storing means 15 that stores a variety of media in files to provide an appropriate media file for video browsing to a user, and an index storing means 14 that stores structural information about scenes or shots, and index information including relevant key frame information and time information.

Jun does not teach or suggest a video-on-demand system that includes the feature of "said media server generating a first series of searchable index frames from the video signal during transmission of the video signal, and storing said first series of searchable index frames thereon". Instead, Jun discloses an index storing means that stores structural information about scenes or shots, and index information including relevant key frame information and time information. Thus, Jun fails to teach or suggest each and every feature of amended independent claim 1.

In the Office Action, the Examiner acknowledges that Jun does not teach a video-on-demand system that includes a client player as recited in claim 1. The Examiner, however, asserts that Liu teaches this feature of the claimed invention. Applicants respectfully disagree with Examiner characterization of the Liu reference and submits that Liu does not cure the deficiencies of Jun.

Liu teaches a device for semantically compressing video data that includes a buffer having two or more buffer slots for receiving uncompressed video data that includes a plurality of video segments, and a processor connected to the buffer. The processor organizes a portion of the uncompressed video data into the two or more buffer slots such that each of the two or more buffer slots is filled with one or more of the received video data segments, thereby forming two or more buffered video portions corresponding to the two or

more buffered video slots. The processor then applies a leaking rule to the two or more buffered video portions to extract and record one or more buffered video portions. An output means, connected to the processor, outputs the buffered video portions which were not extracted as compressed video data.

Liu further teaches, at paragraph [0085]:

As an illustration of video indexing and interactive searching, a result of indexing a sitcom video is shown in FIG. 8. Referring to FIG. 8, the user is provided with a set of top level units, in this case 11 frames, from which he or she may choose a particular segment to view. This may be done by clicking on a start key frame and an end key frame. For example, the user may select a segment between a key frame 656, and a key frame 2251. Then, any number of key frames of this video segment can be shown for user review. For example, indexing level 2 provides 7 key frames in this segment. The user can choose to display more key frames, by using a simple "click-drag" operation. An exemplary "click-drag" is a C++ Application shown in Appendix 7. The user clicks on the end frame of the selected video segment, holds the mouse button and drags the mouse to the side. As the start key frame and the end key frame move apart, the next most significant key frames fill in the empty area. Using this simple operation, the user can get any number of key frames at a particular level. (emphasis added)

Liu does not teach or suggest a video-on-demand system that includes, inter alia, "said client player generating a second series of searchable index frames from the received video signal and storing the second series of searchable index frames thereon" as recited in amended independent claim 1. Instead, Liu teaches that a processor organizes a portion of the uncompressed video data into the two or more buffer slots such that each of the two or more buffer slots is filled with one or more of the received video data segments.

Liu also does not teach or suggest the feature of "said client player accessing said first series or said second series of searchable index frames and obtaining a required searchable index frame therefrom upon receipt of a request to modify the play parameters for display of the selected video, said required searchable index frame providing a new starting point for displaying the selected video" as recited in amended claim 1. Instead, Liu teaches that a user may choose a key frame to view a particular segment of a sitcom video. Thus, Liu fails to teach or suggest each and every feature of amended independent claim 1.

Applicants therefore submit that the cited Jun and Liu references, taken alone or in combination, fail to teach or suggest a video-on-demand system that includes all the features recited in amended independent claim 1. Thus, a skilled person, following the teachings of Jun and Liu, taken alone or in combination, could not arrive at the claimed invention in any predictable manner.

Accordingly, independent claim 1 is patentable over the teachings of Jun and Liu, taken alone or in combination.

#### **B. Claims 2, 4-7: Jun in view of Ellis**

The Examiner has rejected claims 2 and 4-7 as being unpatentable over U.S. Patent Publication No. 2003/0122861 to Jun in view of U.S. Patent Publication No. 2004/01 1783 1 to Ellis. Applicants respectfully traverse the Examiner's rejection and submit the following for the Examiner's consideration.

Applicants submit that Ellis does not cure the deficiencies of Jun and Liu. In particular, Ellis fails to teach or suggest a video-on-demand system that includes the features of "said media server generating a first series of searchable

index frames from the video signal during transmission of the video signal, and storing said first series of searchable index frames thereon", "said client player generating a second series of searchable index frames from the received video signal and storing the second series of searchable index frames thereon", and "said client player accessing said first series or said second series of searchable index frames and obtaining a required searchable index frame therefrom upon receipt of a request to modify the play parameters for display of the selected video, said required searchable index frame providing a new starting point for displaying the selected video" as recited in amended claim 1. Thus, amended independent claim 1 is patentable over the combined teachings of Jun, Liu, and Ellis.

Dependent claims 2 and 4-7 include at least all the limitations of independent claim 1 and therefore dependent claims 2 and 4-7 claims are patentable over the combined teachings of Jun, Liu, and Ellis, either alone or in combination.

**C. Claims 3,8: Jun in view of Guedalia**

The Examiner has rejected claims 3 and 8 as being unpatentable over U.S. Patent Publication No. 2003/0122861 to Jun in view of U.S. Patent No. 6,721,952 to Guedalia. Applicants respectfully traverse the Examiner's rejection and submit the following for the Examiner's consideration.

Applicants submit that Guedalia does not cure the deficiencies of Jun and Liu. In particular, Guedalia fails to teach or suggest a video-on-demand system that includes features of "said media server generating a first series of searchable index frames from the video signal during transmission of the video signal, and storing said first series of searchable index frames thereon", "said client player generating a second series of searchable index frames from the received video signal and storing the second series of searchable index frames thereon", and "said client player accessing said first series or said second series of searchable index frames and obtaining a required searchable index frame therefrom upon receipt of a request to modify the play parameters for display of the selected video, said required searchable index frame providing a new starting point for displaying the selected video" as recited in amended claim 1. Thus, amended independent claim 1 is patentable over the combined teachings of Jun, Liu, and Guedalia.

Dependent claims 3 and 8 include at least all the limitations of independent claim 1 and therefore dependent claims 3 and 8 are patentable over the combined teachings of Jun, Liu, and Guedalia, either alone or in combination.

**D. Claim 9: Jun in view of Ellis**

The Examiner has rejected claim 9 as being unpatentable over U.S. Patent Publication No. 2003/0122861 to Jun in view of U.S. Patent Publication No. 2004/0117831 to Ellis. Applicants respectfully traverse the Examiner's rejection and submit the following for the Examiner's consideration.

Applicants submit that Ellis does not cure the deficiencies of Jun and Liu. In particular, Ellis fails to teach or suggest a video-on-demand system that includes the features of "said media server generating a first series of searchable index frames from the video signal during transmission of the video signal, and storing said first series of searchable index frames thereon", "said client player generating a second series of searchable index frames from the received video signal and storing the second series of searchable index frames thereon", and "said client player accessing said first series or said second series of searchable index frames and obtaining a required searchable index frame therefrom upon receipt of a request to modify the play parameters for display of the selected video, said required searchable index frame providing a new starting point for

displaying the selected video" as recited in amended claim 1. Thus, amended independent claim 1 is patentable over the combined teachings of Jun, Liu, and Ellis.

Dependent claim 9 includes at least all the limitations of independent claim 1 and therefore dependent claim 9 is patentable over the combined teachings of Jun, Liu, and Ellis, either alone or in combination.

**E. Claims 10, 11: Jun in view of Liu, further in view of Watt**

The Examiner has rejected claims 10 and 11 as being unpatentable over U.S. Patent Publication No. 2003/0122861 to Jun, in view of U.S. Patent Publication No. 2005/0213656 to Liu, further in view of U.S. Patent Publication No. 2004/0221323 to Watt. Applicants respectfully traverse the Examiner's rejection and submit the following for the Examiner's consideration.

Regarding dependent claim 10, Applicants submit that Watt does not cure the deficiencies of Jun and Liu. In particular, Watt fails to teach or suggest a video-on-demand system that includes either the features of "said media server generating a first series of searchable index frames from the video signal during transmission of the video signal, and storing said first series of searchable index frames thereon", "said client player generating a second series of searchable index frames from the received video signal and storing the second series of searchable index frames thereon", and "said client player accessing said first series or said second series of searchable index frames and obtaining a required searchable index frame therefrom upon receipt of a request to modify the play parameters for display of the selected video, said required searchable index frame providing a new starting point for displaying the selected video" as recited in amended claim 1. Thus, amended independent claim 1 is patentable over the combined teachings of Jun, Liu, and Watt.

Dependent claim 10 includes at least all the limitations of independent claim 1 and therefore dependent claim 10 is patentable over the combined teachings of Jun, Liu, and Watt.

Regarding claim 11, independent claim 11, Applicants submit that since independent claim 11 includes similar subject matter as independent claim 1, independent claim 11 is patentable over the teachings of Jun and Liu, taken alone or in combination, for the same reasons independent claim 1 is patentable over Jun and Liu, taken alone or in combination.

Watt does not cure the deficiencies of Jun and Liu. In particular, Watt fails to teach or suggest the features of "generating, at the media player, first series of searchable index frames from the video signal while transmitting the video signal and storing the first series of searchable index frames at the media player", "generating, at the client player, a second series of searchable index frames from the received video signal while receiving the video signal, storing the second series of searchable index frames and displaying the selected video at the client player" and "searching said first series or second series of searchable index frames for a required searchable index frame, said required searchable index frame providing a new starting point for displaying said selected video" as recited in amended independent claim 11. Thus, amended independent claim 11 is patentable over the combined teachings of Jun, Liu, and Watt, either alone or in combination.

**F. Claim 12: Jun in view of Ellis**

The Examiner has rejected claim 12 as being unpatentable over U.S. Patent Publication No. 2003/0122861 to Jun in view of U.S. Patent Publication No. 2004/0117831 to Ellis. Applicants respectfully traverse the Examiner's rejection and submit the following for the Examiner's consideration.



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Applicants submit that Ellis does not cure the deficiencies of Jun, Liu and Watt. In particular, Ellis fails to teach or suggest a video-on-demand system that includes the features of "generating, at the media player, first series of searchable index frames from the video signal while transmitting the video signal and storing the first series of searchable index frames at the media player", "generating, at the client player, a second series of searchable index frames from the received video signal while receiving the video signal, storing the second series of searchable index frames and displaying the selected video at the client player", and "searching said first series or second series of searchable index frames for a required searchable index frame, said required searchable index frame providing a new starting point for displaying said selected video" as recited in amended claim 11. Thus, amended independent claim 11 is patentable over the combined teachings of Jun, Liu, Watt, and Ellis.

Dependent claim 12 includes at least all the limitations of independent claim 11 and therefore claim 12 is also patentable over the combined teachings of Jun, Liu, Watt, and Ellis, either alone or in combination.

**G. Claim 13: Jun in view of Watt**

The Examiner has rejected claim 13 as being unpatentable over U.S. Patent Publication No. 2003/0122861 to Jun in view of U.S. Patent Publication No. 2004/0221323 to Watt. Applicants respectfully traverse the Examiner's rejection and submit the following for the Examiner's consideration.

Watt does not cure the deficiencies of Jun, Liu and Watt. In particular, Watt fails to teach or suggest a video-on-demand system that includes the features of "generating, at the media player, first series of searchable index frames from the video signal while transmitting the video signal and storing the first series of searchable index frames at the media player", "generating, at the client player, a second series of searchable index frames from the received video signal while receiving the video signal, storing the second series of searchable index frames and displaying the selected video at the client player", and "searching said first series or second series of searchable index frames for a required searchable index frame, said required searchable index frame providing a new starting point for displaying said selected video" as recited in amended claim 11. Thus, amended independent claim 11 is patentable over the combined teachings of Jun, Liu, and Watt.

Dependent claim 13 include at least all the limitations of independent claim 11 and therefore dependent claim 13 is also patentable over the combined teachings of Jun, Liu, and Watt, either alone or in combination.

**H. Claim 14: Jun in view of Ellis, further in view of Guedalia**

The Examiner has rejected claim 14 as being unpatentable over U.S. Patent Publication No. 2003/0122861 to Jun, in view of U.S. Patent Publication No. 2004/011783 1 to Ellis, further in view of U.S. Patent No. 6,721,952 to Guedalia. Applicants respectfully traverse the Examiner's rejection and submit the following for the Examiner's consideration.

Applicants submit that Guedalia does not cure the deficiencies of Jun, Liu and Ellis. In particular, Guedalia fails to teach or suggest a video-on-demand system that includes the features of "generating, at the media player, first series of searchable index frames from the video signal while transmitting the video signal and storing the first series of searchable index frames at the media player", "generating, at the client player, a second series of searchable index frames from the received video signal while receiving the video signal, storing the second series of searchable index frames and displaying the selected video at the client player", and "searching said first series or second series of searchable index frames for a required searchable index frame, said required searchable

index frame providing a new starting point for displaying said selected video" as recited in amended claim 11. Thus, amended independent claim 11 is patentable over the combined teachings of Jun, Liu, Watt, Ellis, and Guedalia.

Dependent claim 14 includes at least all the limitations of independent claim 11 and therefore dependent claim 14 is also patentable over the combined teachings of Jun, Liu, Watt, Ellis, and Guedalia, either alone or in combination.

**I. Claim 15: Jun in view of Sherr**

The Examiner has rejected claim 15 as being unpatentable over U.S. Patent Publication No. 2003/0122861 to Jun in view of U.S. Patent Publication No. 2002/0032905 to Sherr. Applicants respectfully traverse the Examiner's rejection and submit the following for the Examiner's consideration.

Applicants submit that Sherr does not cure the deficiencies of Jun, Liu and Watt. In particular, Sherr fails to teach or suggest a video-on-demand system that includes the features of "generating, at the media player, first series of searchable index frames from the video signal while transmitting the video signal and storing the first series of searchable index frames at the media player", "generating, at the client player, a second series of searchable index frames from the received video signal while receiving the video signal, storing the second series of searchable index frames and displaying the selected video at the client player" and "searching said first series or second series of searchable index frames for a required searchable index frame, said required searchable index frame providing a new starting point for displaying said selected video" as recited in amended claim 11. Thus, amended independent claim 11 is patentable over the combined teachings of Jun, Liu, Watt, and Sherr.

Dependent claim 15 includes at least all the limitations of independent claim 11 and therefore claim 15 is also patentable over the combined teachings of Jun, Liu, Watt, and Sherr, either alone or in combination.

**Examiner's Response:**

The rejection of claim 1 is withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ohyama (U.S. PGPub 2002/0133826 A1) and Krause et al. (U.S. Patent 5,949,948).

The rejection of claim 11 is withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Krause and Jun et al. (U.S. PGPub 2003/0122861 A1) and Liu et al. (U.S. PGPub 2005/0213656 A1) and Igawa et al. (U.S. PGPub 2004/0086262 A1) and Watt (U.S. PGPub 2004/0221323 A1).

The rejections of claims 2-10 and 12-15 are not withdrawn because the rejections to claims 1 and 11 have been modified.

### ***Examination Considerations***

17. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim should not be read into the claim. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969) (MPEP p 2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.
18. Examiner's Notes are provided with the cited references to prior art to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and spirit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but a link to prior art that one of ordinary skill in the art would find inherently appropriate.
19. Unless otherwise annotated, Examiner's statements are to be interpreted in reference to that of one of ordinary skill in the art. Statements made in reference to the condition of the disclosure constitute, on the face of it, the basis and such would be

obvious to one of ordinary skill in the art, establishing thereby an inherent prima facie statement.

20. Examiner's Opinion: ¶¶ 17. 19. apply. The Examiner has full latitude to interpret each claim in the broadest reasonable sense.

### ***Conclusion***

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

***Correspondence Information***

22. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to MARY ANNE KAY whose telephone number is (571)270-5677. The Examiner can normally be reached on Monday - Friday, 8:00 AM - 5:00 PM, EST.

As detailed in MPEP 502.03, communications via Internet e-mail are at the discretion of the Applicant. Without a written authorization by Applicant recorded in the Applicant's file, the USPTO will not respond via e-mail to any Internet correspondence which contains information subject to the confidentiality requirement as set forth in 35 U.S.C. 122. A paper copy of such correspondence will be placed in the appropriate patent application. The following is an example authorization which may be used by the Applicant:

Notwithstanding the lack of security with Internet Communications, I hereby authorize the USPTO to communicate with me concerning any subject matter related to the instant application by e-mail. I understand that a copy of such communications related to formal submissions will be made of record in the applications file.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Joseph Hirl can be reached on (571)272-3685. Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,  
Washington, D. C. 20231;

Hand delivered to:

Receptionist,  
Customer Service Window,

Randolph Building,  
401 Dulany Street,  
Alexandria, Virginia 22313,

(located on the first floor of the south side of the Randolph Building);

or faxed to:

(571)273-8300 (for formal communications intended for entry).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mary Anne Kay  
Examiner

/Joseph P. Hirl/  
Supervisory Patent Examiner, Art Unit 2426  
February 28, 2010